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March 19, 2021

SUBJECT: Request for Proposal / RFP #142F-20 / Midlife Overhaul of 60 New Flyer Forty-Foot Hybrid Buses

Addendum No. 8

Dear Bidders:

Please be advised that the above has been amended and/or clarified as shown on the attached that is made a part of herein.

Addendum No. 4 included an extension to the Proposal Due Date from February 25, 2021 to March 25, 2021 @ 2:00PM.

A final Proposal Due Date extension is being provided to April 1, 2021 @ 2:00PM.

Important note: Do **NOT** use the attachment posted in COMMBUYS entitled “Attachment 6 PRICING Rev. 1” for pricing.

Instead, for their price proposals, Bidders **must** use the Excel Table entitled as follows:

“Attachment 6 PRICING Rev. 2”

Acknowledgment of this Addendum must be so noted on your proposal submittal.

ALL ELSE REMAINS AS PREVIOUSLY STATED.

Sincerely,

Joe Flynn

Sourcing Executive

Attachments include:

- Revised Pricing Spreadsheet (Rev. 2)
- TS Attachment No. 6 – Option 5 Increased Capacity Energy Storage System with Geofencing

MBTA
RFP 142F-20 / Technical Specification VE20-051

CLARIFICATIONS

Reminder: All bidders interested in submitting proposals **must be registered/certified** on COMMBUYS in order to submit proposals electronically.

Requests for Clarification Process:

The Request for Clarification (RFC) submittal period is now closed.

The Authority has reviewed RFCs provided and has made best efforts to answer all RFCs submitted.

The following clarifications to questions/RFCs received are provided below:

General Clarification:

The Authority recommends all Proposers review RFP 142F-20, including Technical Specification VE20-051 and all attachments, and Addenda, in their entirety. Bidders are responsible for developing a price to perform the scope of work required for all tasks outlined in RFP 142F-20 and Technical Specification VE20-051. This may involve contacting suppliers, subcontractors, and OEMs as required to obtain training, technical information, and pricing to prepare a complete proposal. The Authority will review/approve work scope, procedures, and material, as part of the Design Review Process.

MBTA
RFP 142F-20 / Technical Specification VE20-051

PROVISIONS

The Authority has reviewed RFCs provided and has made best efforts to answer all RFCs submitted.

Amend RFP 142F-20 as follows:

RFP 142F-20 Attachment 6:

Do **NOT** use the attachment posted in COMMBUYS entitled “RFP 142F-20 Attachment 6 Rev. 1” for pricing.

Bidder’s proposals **will not be in compliance** if the original Attachment 6 or Rev 1. is used.

Instead, for their price proposals, Bidders must use the Excel Table entitled as follows:

“**Attachment 6 PRICING Rev. 2**” – *This will be a separate attachment from this Addendum.*

Page 12 – Section 1.4. – Request for Proposal Timeline

Please revise the Request for Proposal Timeline to read as follows:

“RFP Release: **January 12, 2021**

Pre-Proposal Conference: **January 26, 2021**

Request for Clarification Deadline: **March 3, 2021**

Proposal Due Date: **April 1, 2021 @ 2:00PM EST**”

Page 10 – Section 1.1 B Option 5 – Plug-in Hybrid Retrofit

Remove the following:

OPTION 5 – Plug-in Hybrid Retrofit

The Contractor shall install and integrate a plug-in hybrid solution. This includes materials procurement; and installation of new on-board charging equipment and all related subcomponents including cables, harnesses, and connectors. The Contractor is responsible for all costs associated with software and hardware updates/modifications.

Replace in its entirety with:

“OPTION 5 – Increased Capacity Energy Storage System with Geofencing

The Contractor shall install and integrate an Increased Capacity Energy Storage System (ESS) with Geofencing. This includes materials procurement; and installation of equipment and all related subcomponents including cables, harnesses, and connectors. The Contractor is responsible for all costs associated with software and hardware updates/modifications. The Contractor shall provide software updates/modifications and licensing/subscriptions for the Geofencing System for 6 years from delivery of the final production bus.

Note: Option 5 pricing must include a credit for the base order cost for TS 3.9.1 Energy Storage System (ESS) material and work scope.”

Page 134 – Section 12.2.10. Technical Proposal Requirements - 2. Optional Work Scope e. Option 5

Remove the following:

- e. OPTION 5 – Plug-in Hybrid Retrofit.** The Contractor shall install and integrate a plug-in hybrid solution. This includes materials procurement; and installation of new equipment and all related subcomponents including cables, harnesses, and connectors. The Contractor is responsible for all costs associated with software and hardware updates/modifications.
 - (i) Examples of similar electrical vehicle / plug-in hybrid or relevant bus integration projects and successful application demonstrating accuracy, longevity, and quality of installation with the related projects.
 - (ii) The Technical Proposal submittal package should include feasibility study, conceptual design, proposed design configuration (e.g. parallel vs. series operation, modifications to existing configuration, software/hardware updates), PHEV ESS life expectancy, and subcontractor/sub-supplier affirmation of concept viability.
 - (iii) How will the Contractor engage the bus manufacturer, existing hybrid drive system OEM, and other component OEMs to meet PHEV bus performance requirements and optimize the system PHEV design with the existing bus configuration?
 - (iv) The Technical Proposal submittal package should include specific details on the Bus Performance in Full Electric Mode for each of the described parameters/metrics identified below (A through E):
 - A. ESS Consumption vs. Engine Speed
 - B. Acceleration vs. Time
 - C. Change of Accelerations vs. Time
 - D. Vehicle Speed vs. Time
 - E. Vehicle Speed vs. Grade (e.g. (>40 mph @ 2.5%), (>10 mph @ 10%) and (>7 mph @ 16%) for 1 min.)

Example B. Acceleration Graph Format

Maximum Start Acceleration Time on a Level Surface	
Speed (mph)	Maximum time (sec)
10	5
20	10
30	18
40	30
50	60
Top Speed	
1. Vehicle Weight = GVWR	

Please note the following assumptions must be considered when calculating performance metrics: bus operating at 68 °F at GVWR with maximum auxiliary loads, with test beginning with maximum standard operating State of Charge (SoC), and batteries not being depleted below minimum standard SoC.

- (v) Bus Performance in Full Electric Mode to be included in the technical proposal, by completing the calculations in the table provided below. Assumptions to include: bus operating at 68 °F, at GVWR, at 0% grade, Manhattan duty cycle; with maximum auxiliary loads, with test beginning with maximum standard operating SoC, and batteries not being depleted below minimum standard SoC. The Contractor's proposed battery size must meet Technical Specification Section 3.25.5 requirements.

ESS Size (kWh)	Distance Traveled in Full Electric Mode (Miles)	Time Required to Return ESS to full SoC in Hybrid Mode (Engine Run Time)	Depot Charger Power	Time Required to Return ESS to full SoC Using Depot Charger
	1		125 kW	
	2		125 kW	
	3		125 kW	
	4		125 kW	
	5		125 kW	

Replace in its entirety with the following:

“ e. OPTION 5 – Increased Capacity Energy Storage System with Geofencing. The Contractor shall install and integrate an increased Capacity Energy Storage System (ESS) with Geofencing solution. This includes materials procurement; and installation of new equipment and all related subcomponents including cables, harnesses, and connectors. The Contractor is responsible for all costs associated with software and hardware updates/modifications.

- (i) Examples of similar bus integration projects and successful application demonstrating accuracy, longevity, and quality of installation with the related projects.
- (ii) The Technical Proposal submittal package should include proposed design configuration (e.g. modifications to existing configuration, mounting and installation approach, integration with existing components, software/hardware updates), ESS size (kWh) and life expectancy, and relevant geofencing solution information (to include provider/subcontractor if applicable).
- (iii) How will the Contractor engage the bus manufacturer, existing hybrid drive system OEM, and other component OEMs to meet TS Attachment 6 bus performance requirements and optimize the geofencing solution?
- (iv) Proposed geofencing solution approach, including plan to make software modifications and coordinate Authority approved changes to geofencing location-based mapping for the 6-year service requirement.

- (v) Bus Performance in Full Electric Mode to be included in the technical proposal, by completing the calculations in the table provided below. Assumptions to include: bus operating at 68 °F, at GVWR, at 0% grade, Manhattan duty cycle; with maximum auxiliary loads, with test beginning with maximum standard operating SoC, and batteries not being depleted below minimum standard SoC. The Contractor's proposed battery size must meet Technical Specification Section 3.25.5 requirements.

ESS Size (kWh)	Distance Traveled in Full Electric Mode (Miles)	ESS Energy Consumption (kWh)	Time Required to Return ESS to full SoC in Hybrid Mode (Engine Run Time)
	1		
	2		
	3		
	4		
	5		

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Amend Technical Specification VE20-051 as follows:

Pages 39-40 – Section 3.8 – Fire Suppression System:

Remove the fourth paragraph:

Thermostats and backup batteries shall be installed within the first six (6) months of the manufacture date.

Replace with:

“Thermostats and backup batteries shall be installed within the **first year** of the manufacture date.”

Page 55 – Section 3.16.9 – Driver's Barrier:

Remove the second paragraph:

The Contractor, while working with the Arow Global, will provide a proposal for a retrofit including materials and labor to install extended coverage glazing.

Replace with:

“The Contractor, while working with the Arow Global, will provide a proposal for a retrofit including materials and labor to install extended coverage glazing. ***An Authority approved extended coverage glazing design will be installed as part of basic work.***”

Pages 59-60 – Section 3.18 – Windows and Windshields:

Remove the fourth paragraph:

The Contractor shall retrofit all transom window set screw locks with AROW square keyed locks. All transom and emergency push out window bulb seals shall be cleaned and appropriately lubricated to prevent sticking. The Contractor shall check the operation of all transom window pistons and condition of seals and report any defects to the Resident Inspector for repair or replacement Hidden damage consideration.

Replace with:

“The Contractor shall retrofit all transom window set screw locks with ***an Authority approved square keyed locks.*** ***This will be reviewed and approved as part of the design review process.*** All transom and emergency push out window bulb seals shall be cleaned and appropriately lubricated to prevent sticking. The Contractor shall check the operation of all transom window pistons and condition of seals and report any defects to the Resident Inspector for repair or replacement Hidden damage consideration.”

Pages 64 – Section 3.25.5 – Option 5 - Plug-in Hybrid Retrofit:

Remove the section in its entirety:

3.25.5 – Option 5 - Plug-in Hybrid Retrofit:

The Contractor shall install and integrate a plug-in hybrid solution. This includes materials procurement; and installation of new equipment and all related subcomponents including cables, harnesses, and connectors. The Contractor is responsible for all costs associated with software and hardware updates/modifications. The Contractor shall reference TS Attachment 6 for additional requirements.

If awarded, final review and approval by the Authority of the Contractor’s plug-in hybrid retrofit shall occur during the design review process.

Replace the section in its entirety with:

3.25.5 – Option 5 – Increased Capacity Energy Storage System with Geofencing:

“The Contractor shall install and integrate an increased capacity energy storage system (ESS) with geofencing solution. This includes materials procurement; and installation of new equipment and all related subcomponents including cables, harnesses, and connectors. The Contractor is responsible for all costs associated with software and hardware updates/modifications. The Contractor shall provide software updates/modifications and licensing/subscriptions for the Geofencing System for 6 years from delivery of the final production bus. The Contractor shall reference TS Attachment 6 for additional requirements.

If awarded, final review and approval by the Authority of the Contractor’s increased capacity energy storage system with geofencing shall occur during the design review process.

Note: Option 5 pricing must include a credit for the base order cost for TS 3.9.1 Energy Storage System (ESS) material and work scope.”

TS Attachment No. 6:

TS Attachment No. 6 – Plug-in Hybrid Retrofit is replaced in its entirety with **TS Attachment No. 6 – Option 5 - Increased Capacity Energy Storage System with Geofencing.**

This will be a separate attachment from this Addendum.

ALL ELSE REMAINS AS PREVIOUSLY STATED.